

Australian Coleman Inc
P.O. Box 505
Smithfield, NSW 2164

Parts &
Factory Service Manual
MODEL 160



This manual is intended as an informational guide in servicing Crosman products. It is not instructional material and we therefore assume no responsibility for those who use same without proper factory training.

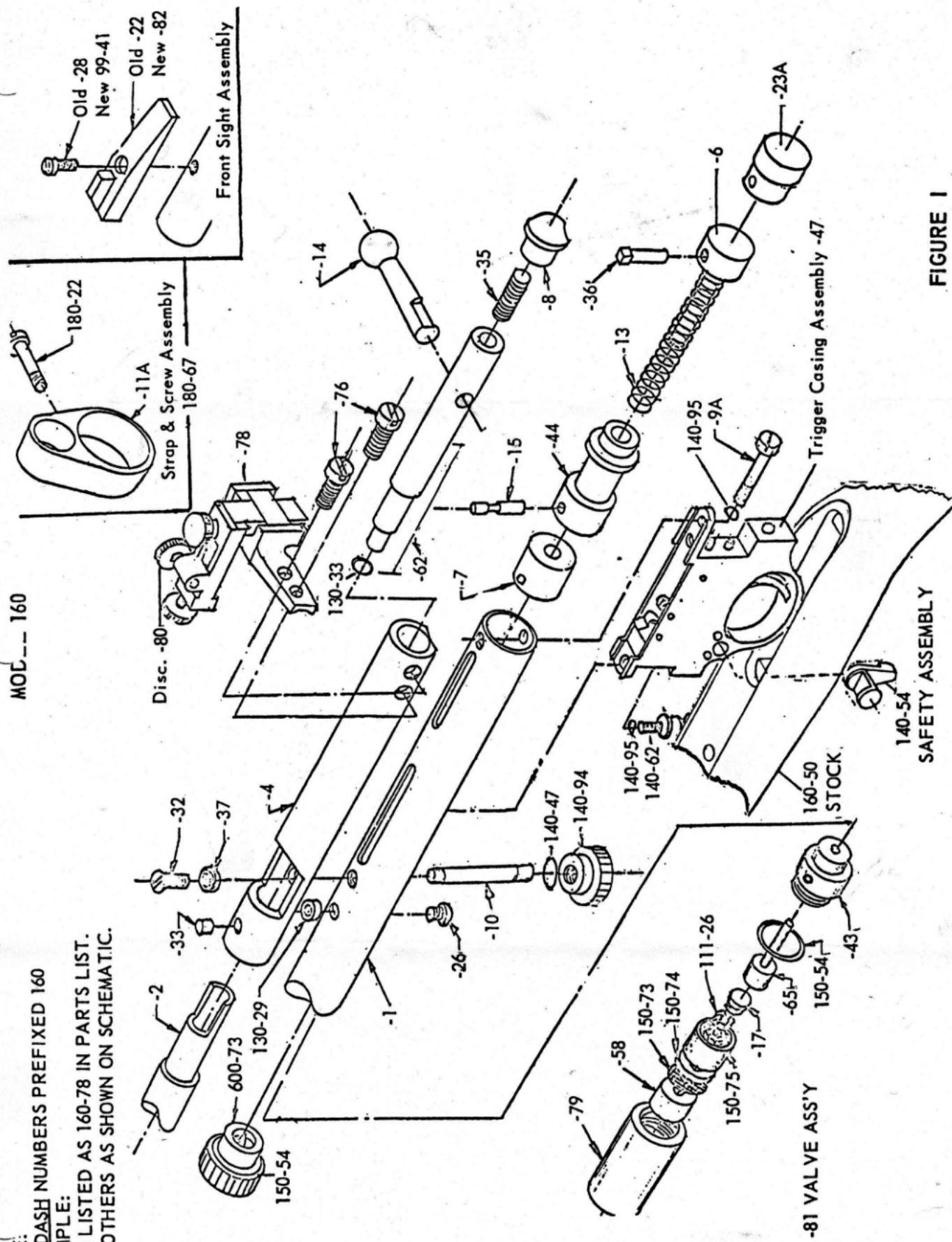
Another "Family Fun" Division of the Coleman Company, Inc.



CROSMAN ARMS

980 Turk Hill Road, Fairport, New York
14450

NOTE:
ALL DASH NUMBERS PREFIXED 160
EXAMPLE:
-78 IS LISTED AS 160-78 IN PARTS LIST.
ALL OTHERS AS SHOWN ON SCHEMATIC.



PARTS LIST AND ASSEMBLIES FOR MODEL 160

<u>PART NO.</u>	<u>PART NAME</u>	<u>PRICE</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>PRICE</u>
160-1	Tube	\$ 5.00	160-50	Stock	\$14.00
160-2	Barrel	7.50	160-58	Filter	.10
160-4	Breech	6.95	160-62	Breech Bolt & "O" Ring Ass'y	3.50
160-6	Cocking Block	1.05	160-65	Valve Stem Ass'y	1.25
160-7	Inside Plug	1.00	160-76	Sight Mount Screws (2)	.10
160-8	Breech Plug	1.05	160-78	Rear Sight (Peep)	12.50
160-9A	Rear Screw	.45	160-79	Piercing Body	1.55
160-10	Locating Screw	.45	160-80	Peep Disc	1.25
160-11A	Strap	.65	160-81	Valve Ass'y	5.75
160-13	Hammer Spring	.10	160-82	Front Sight	.40
160-14	Bolt Knob	.95	167-2	Barrel .177 Cal.	7.50
160-15	Hammer Pin	.20	167-62	Breech Bolt Ass'y .177 Cal.	3.50
160-17	Piercing Pin	.65	99-41	Front Sight Screw	.30
160-23A	Tube Plug	.55	99-54	Butt Plate Screw	.10
160-26	Valve Set Screw	.20	105-45	Creep Screw Lock Spring	.10
160-31	Sear Spring	.10	111-26	Check Valve Spring	.30
160-32	Hold Down Screw	.10	130-29	Breech Gasket	.10
160-33	Barrel Set Screw	.20	130-33	"O" Ring	.10
160-34	Sear Nub Pin (2)	.10	140-25	Pivot Pin (3)	.10
160-35	Breech Bolt Set Screw	.40	140-27	Safety Spring	.10
160-36	Cocking Pin	.45	140-28	Trigger Spring	.10
160-37	Lock Washer	.10	140-34	Safety Rod	.20
160-39	Sear	.45	140-39	Weight Screw	.10
160-40	Creep Screw (2)	.20	140-45	Trigger Casing	1.75
160-43	Exhaust Valve Body	2.20	140-47	Plain Washer	.10
160-44	Hammer	1.05	140-54	Safety Ass'y	1.15
160-46	Trigger	.70	140-62	Casing Screw Front	.20
160-47	Trigger Casing Ass'y	6.95	140-94	Locating Screw Nut	.10
140-95	Casing Lock Washer (2)	.10			
150-54	"O" Ring	.40			
150-73	Screen	.10			
150-74	Washer	.10			
150-75	Spacer	.20			
180-22	Strap Screw	.35			
180-67	Strap & Screw Ass'y	1.10			
180-74	Butt Plate	1.00			
600-73	Tube Cap Ass'y	2.20			
1400-8	Plate Screw (2)	.10			

PARTS FOR SEARS MODEL 1910 & OLD STYLE CROSMAN 160

160-5	Hammer	\$ 1.25
160-12	Safety	.40
160-18	Trigger Guard	.20
160-19	Trigger	.50
160-20	Rear Sight	.20
160-21	Rear Sight Elevator	.10
160-22	Front Sight	.40
160-23	Tube Plug	.75
160-28	Front Sight Screw	.10
160-29	Rear Sight Screw	.10
160-30	Trigger Guard Screw	.10
160-67	Trigger & Bracket Ass'y	1.40
111-30	Trigger Spring	.10

Old Style Stocks Unavailable

KEEP PRICE LIST CURRENT - MAKE ADDITIONS OR CORRECTIONS ON REVERSE SIDE

I. GENERAL INFORMATION:

A. General operating instructions for this model are contained in the "Owner's Manual" which is attached to each product when packaged. Read it carefully.

B. Study the drawing in this manual as you read the disassembly and assembly procedures and prior to disassembling the first time. Many short cuts from factory experience have been written into these instructions and in many cases complete tear-down may not be necessary.

C. Instructions are defined in assembly groups such as Sight Group, Tube Group, etc. Although each group contains its own assembly instructions, the disassembly instructions in each group are a continuation of the disassembly instructions in the previous group.

D. Assembly is in reverse of disassembly but careful note must be made of "caution" procedures throughout this manual in order that you do not encounter problems after complete reassembly.

E. TROUBLE SHOOTING:

1. WILL NOT COCK:

a. Sear Adjustment screws -40 set too close preventing sear engagement. To correct refer to Trigger Adjustment instructions below.

b. Sear -39 and Trigger -46 engagement area worn or damaged.

c. Broken or incorrectly installed sear spring -31.

d. Trigger mechanism dirty and gummed by old dried lubricants. Clean and apply fresh Crosman Pellgun oil.

2. TRIGGER ADJUSTMENT:

a. Remove Stock -50.

b. Turn weight screw -39 for desired trigger pressure.

c. While looking through hole in trigger casing where sear and trigger mechanism meet, turn upper Creep Screw -40 for desired engagement and lower Creep Screw -40 for overtravel. Factory engagement adjustment is approximately 1/16". This should be done with casing assembled and on gun.

3. DETECTING AND ELIMINATING GAS LEAKS:

a. Leak at tube cap 600-73 area. Replace "O" ring 150-54 and apply Pellgun Oil.

b. Leaking from muzzle end of barrel when Breech is closed indicates a defective Valve Stem -65 and/or valve seat (located in Exhaust Valve body -43). This necessitates removal of these parts for servicing. However it is not necessary to remove the entire Valve Assembly -81. Just proceed as follows:

1. Exhaust remaining CO₂.

2. Remove tube cap and empty powerlets.

3. Using a T-9 valve body disassembly tool, unscrew piercing body assembly -79.

4. Hold muzzle end down and allow piercing Body Assembly and valve stem assembly -65 to slide out.

5. After removing stem, check for dents or scratches on rubber washer. Then look down into valve body to check for dents and chips on seat. If valve seat needs to be reseated our valve refacing tool T-8 should be used. This tool holds a soft rubber abrasive grinding stone. This is placed in the valve opening and turned back and forth by hand until dents are removed from valve seat. If an electric drill is used, care should be taken not to press too hard for this will grind out entire valve seat. NOTE: A deep ring groove will form on grinder end of stone. When the ring groove is too deep, the stone will ride on bottom of valve. The stone should be filed to prevent this.

6. Blow out grinding chips.

7. Replace valve stem assembly -65 if the seal is scratched or dented. If a new replacement is unavailable, these defects can be removed in some cases by chucking the stem in a drill press and while spinning, lightly polish the seal with a folded piece of emery cloth #280.

8. Although repairs are seldom necessary to the Filter -58, Screen 150-73, washer 150-74, Spacer 150-75, Spring 111-26 or Piercing Pin -17 all located inside Piercing Body -79, they should be checked for damage and unnecessary wear. Refer to Figure 1 for correct location of these parts.

I. GENERAL INFORMATION: (Cont'd)

9. Insert Valve Stem assembly -65 and Piercing Body assembly -79 back into the tube as follows:

CAUTION: Do not drop Valve Stem into tube as it may damage the Valve Seat. With gun in horizontal position, tilt, and gently allow the valve stem to slide down the tube. Then put gun in Vertical position and jiggle until valve stem seats in Exhaust Valve -43. Return gun to horizontal position, insert Piercing Body assembly -79 and push gently into the tube with the T-9 tool or screwdriver. Turn clockwise and tighten into Exhaust Valve.

c. Damaged or worn "O" ring 150-54 located on Valve Assembly -81. Entire Valve assembly must be removed by complete gun disassembly. However if the "O" ring is just loose which can cause a leak, tighten the Piercing Body -79 with T-9 tool or screw-driver.

d. If gas is observed coming from breech area while firing gun, a damaged Breech Gasket 130-29 is indicated. Replace by following instructions in Breech and Barrel Group F.

e. Defective Breech Bolt "O" ring 130-33, usually caused by improper installation, or burrs in pellet ramp or barrel chamber. Remove old ring, de-burr where necessary and roll new "O" ring over Breech Bolt.

f. Use of excessive or wrong lubricating oil on seals causing deterioration. Use Crosman Silicone Pellgun Oil only.

g. Hammer Spring -13 too long causing the valve stem to remain open resulting in a hissing sound when gun is fired. Replace. Correct length should be 2 1/4".

h. Loose Fit where Breech and Barrel join together. Remove barrel, apply Permatex, and re-insert into Breech.

4. JAMMING:

- Shooting when sufficient gas is not available to drive pellet out.
- Defective "O" Ring 130-33 on Breech Bolt.
- Defective Breech Gasket 130-29.

5. LOW POWER:

- Same as (b) & (c) above.
- Tube cap 600-73 loose preventing powerlet from being pierced.
- Failure to back off tube cap 600-73 after putting in fresh powerlet as instructed in Owners Manual.

6. BREECH BOLT JUMPS BACK WHEN GUN IS FIRED:

- Defective Breech -4. Replace.
- Bolt Knob -14 loose.

II. DISASSEMBLY AND ASSEMBLY:A. GENERAL:1. RESIDUAL GAS REMOVAL:

- Making certain that there are no pellets in the barrel, fire rifle in safe direction to exhaust remaining CO₂ gas.
- Alternate Method:
 - Unlock breech bolt.
 - Push safety lever forward to "Fire" position.
 - Hold Rifle in left hand, squeeze and hold trigger to rear.
 - With right hand work Breech Bolt knob back and forth with a short quick motion.
- Remove tube cap assembly 600-73 and empty powerlets.
- Inspect tube cap for damaged "O" ring 150-54.

B. STOCK GROUP:

- Remove Safety Assembly 140-54 by turning to "Safe" and pulling assembly out of Trigger Housing.

II. DISASSEMBLY AND ASSEMBLY: (Cont'd)

2. Remove Nut 140-94 and Washer 140-47 at bottom of Stock -50.
3. Remove Stock carefully. Do not bind Trigger Housing by lifting on barrel. Light tapping with palm of hand on trigger guard will aid in removal of gun action and Trigger without binding.
4. Reassembly is in reverse order except for replacement of the safety assembly. This can be accomplished by depressing safety rod -34 (inside Trigger Casing) with a suitable tool from one side of trigger casing while inserting safety assembly -54 in other side. Choice of sides depend on whether left or right hand safety is desired.

C. TRIGGER GROUP:

1. Place gun in vise upside down, just behind strap -11 clamping against both Tube and Barrel. Vise jaws should be protected to prevent scratching the finish.
2. Remove Casing Screw 140-62 and 9A and lock washers 140-95 (2) releasing Trigger Housing Assembly -47 from tube. NOTE: When removing Casing Screw 9A be careful that Tube Plug 23A and Breech Plug 8 do not drop out. Screw 9A may be loosely reinstalled when working on Trigger Group only. See Figure I.
3. Disassemble Trigger Casing -47 as follows: (Refer to Figure II)
 - a. Remove 2 plate screws 140-8 and Plate 140-40.
 - b. Remove Safety Rod 140-34 and Spring 140-27.
 - c. Disengage Sear Spring 31 and remove. Remove Sear 39. NOTE: Be careful not to lose Sear Nub Pins -34 assembled to Sear.
 - d. Unscrew Trigger Weight screw 140-39 and remove Trigger Spring 140-28.
 - e. Remove Trigger 46 and overtravel and Sear Engagement Screws 40.
4. Reassemble in reverse order.

CAUTION: Short extension of Sear Spring 31 seats against Sear Nub Pins -34 under the Sear -39. The long extension of the spring seats against pins on top of Sear. Correct positions are shown in Figure II.

5. Reassemble Trigger Housing -47 to gun.

NCTE: At this point Trigger adjustment, if desired or necessary, should be made. Refer to Trouble Shooting Section 2 for instructions.

D. SIGHT GROUP:

1. Reverse gun in vise to upright position.
2. Remove front sight screw 99-41 (old -28) and Front Sight -82 (old -28).
3. Remove Rear Peep Sight Mount Screws -76 and Peep Sight -78.
4. Repair or replace as necessary and reassemble in reverse order.

E. STRAP GROUP:

1. Loosen but do not remove strap screw 180-22 and slide Strap Assembly 180-67 off barrel and tube.
2. Replace necessary parts.

CAUTION: If it is necessary to replace the strap screw 180-22 install in strap 11A before sliding the assembly back on gun. Be sure that threaded end of screw is completely turned into strap just enough so that the threads do not interfere with the barrel and tube.

3. Slide Strap Assembly back on gun.

F. BREECH AND BARREL GROUP:

1. Remove Tube Plug -23A, Barrel Set Screw -33 (with 3/32" Allen wrench), and loosen Strap screw 180-22 three (3) turns maximum.
2. Remove Barrel -2 by sliding forward out of Strap 11. It is not necessary to remove the entire Strap Assembly 180-67 at this time but if repairs are needed refer to Strap Group E. above.
3. Remove Hold Down Screw -32 and Lock Washer -37. Separate Breech Assembly from Tube Assembly.

II. DISASSEMBLY AND ASSEMBLY: (Cont'd)

NOTE: Hammer Pin -15 and Cocking Pin -36 may fall out. If not, remove anyway and place aside. Remove Breech Gasket 130-29.

4. Remove Breech Plug 160-8.
5. Using a 3/32" Allen wrench, loosen Breech Bolt Set screw -35, Breech Bolt Knob -14, and Breech Bolt Assembly -62.
6. Inspect all parts for damage and/or wear and replace as necessary.
7. Reassemble as follows:
 - a. After replacing "O" Ring 130-33, insert Breech Bolt Assembly -62 into Breech -4 with the recessed flats down.
 - b. Insert Breech Bolt Knob back into Breech Bolt Assembly. Align so that Breech Bolt set screw -35 will fit into recess in Bolt Knob shaft.
 - c. Tighten Breech Bolt Set Screw -35.
8. Locate Breech Assembly on Tube Assembly as follows:
 - a. Place new Breech Gasket 130-29 on tube hole.
 - b. Install Hammer Pin -15 and Cocking Pin -36 as per Figure 1.
 - c. Locate rear flat recess on Breech Bolt over Cocking Pin -36 with slight pressure forward compressing Spring -13 and locate front flat recess on Breech Bolt over Hammer Pin -15 being careful not to dislodge Breech Gasket 130-29.
 - d. Slide Breech Assembly back to align holes for Rear Screw -9A. Temporarily insert rear screw -9A.
 - e. Replace Hold-Down Screw -32 and Washer -37. CAUTION: Do not burr screw driver slot in this screw because burrs will make it difficult to insert Barrel into Breech due to close tolerance.
9. Slide Barrel Back into position through Strap Assembly and into Breech.
10. Tighten Barrel Set Screw -33.
11. Tighten Strap Screw 180-22. Be careful not to strip.

G. TUBE, HAMMER, AND VALVE GROUP:

1. In order to disassemble this group the Barrel and Breech must be removed first. Refer to Group F.
2. Remove Cocking Block -6, Hammer Spring -13 and Hammer -44 from rear of Tube.
3. Removal of Inner Plug -7 is not necessary. However, if this does become necessary, Locating Screw -10 must be removed first. NOTE: When replacing the plug be sure that the screw hole is forward in the tube.
4. Remove Valve Assembly -81 as follows:

SPECIAL NOTE: If the Valve Assembly is of the old design there is no slot in the rear of the Piercing Body -79. Therefore it cannot be removed by the method described in (a) below (with T-9 tool or screwdriver). To remove old style assembly lubricate the inside of the tube and proceed as instructed in (a) (c) and (d).

- a. Using a special Crosman Tool T-9 or wide blade center slotted (to prevent damage to Piercing Pin -17) screwdriver turn Piercing Body -79 one complete turn counter clockwise from the front of the tube. This will release pressure of "O" Ring 150-54 against inner tube wall.
- b. Remove Valve Set Screw -26 from bottom of Tube -1.
- c. Readjust tube in vise to prevent binding of valve assembly.
- d. Using long 3/16" diameter ramrod apply pressure to Valve Stem -65 inside tube from the rear and tap the stem through the Inside Plug -7. Push until valve is completely removed from tube.
- e. (See note below) Disassemble valve, inspect all parts replacing those necessary, lubricate and reassemble. For information on the internal parts of Piercing Body -79 refer to Trouble Shooting Section 3, Paragraph (b) sub-paragraph (8).

NOTE: Replacement parts for the old style Valve Assembly (the one without the slot in the Piercing Body) are no longer available. Therefore a complete new Valve Assembly -81 must be substituted.

II. DISASSEMBLY AND ASSEMBLY: (Cont'd)

5. Reassemble as follows:

- a. After oiling "O" Ring 150-54 insert Valve Assembly into threaded end of Tube -1.

CAUTION: Be sure not to tighten Piercing Body -79 against Exhaust Valve Body -43 as pressure will expand the "O" Ring causing difficulty in sliding the Valve Assembly into the Tube.

- b. Push Valve Assembly -81 into tube with the T-9 tool or special screwdriver until the Valve Stem enters the Inside Plug hole and seats properly against the plug. Turn the valve assembly to line up with Valve set screw hole on bottom of tube and replace the Valve set screw -26.

- c. Tighten Piercing Body -79 against Exhaust Valve Body -43 with the T-9 Tool or special screwdriver. This will expand the "O" Ring 150-54 and prevent leakage.

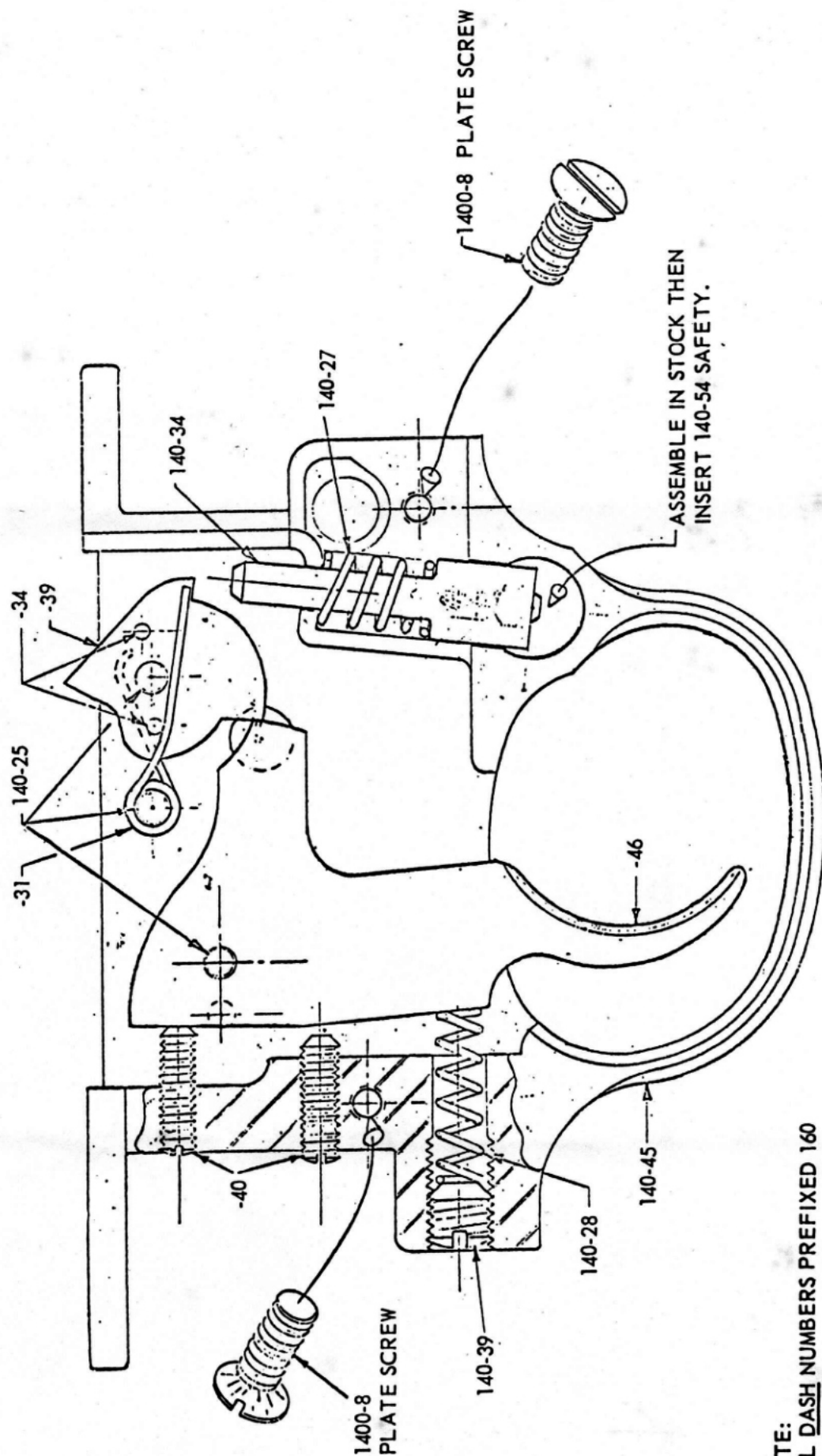
- d. Insert Hammer -44, Hammer Spring -13 and Cocking Block -6 into rear of Tube -1 as illustrated in Figure 1.

- e. Insert Cocking Pin -36 and Hammer Pin -15 through long slots in Tube -1; square head pin toward rear; round head pin toward front,

III. ADDITIONAL COMMENTS:

(Use the following space for additional notes, pen and ink changes and other factory revisions)

MODEL 160



NOTE:
ALL DASH NUMBERS PREFIXED 160
EXAMPLE:
-46 IS LISTED AS 160-46 IN PARTS LIST.
ALL OTHERS AS SHOWN ON SCHEMATIC.

FIGURE II - TRIGGER CASING ASSEMBLY -47